

LAND APPLICATION OF BIOSOLIDS
ROY HOPKINS

LO75 (FIELDS 4 – 8, 11 – 16, 18, 20 – 43)
LOUISA COUNTY, VIRGINIA
JULY 2011





June 5, 2012

Mr. Ed Stuart
Dept of Environmental Quality
Northern Virginia Regional Office
13901 Crown Court
Woodbridge, VA 22193

Dear Mr. Stuart:

Transmitted herein for your consideration is land application site for Roy Hopkins (designated as LO 75, fields 4-8, 11-16, 18, 20-43), located in Louisa County, Virginia. This submission contains strictly site specific information. Please refer to the operations and maintenance manual submitted under separate cover for all non-site specific information.

Do not hesitate to contact me at (804) 443-2170 should you have any questions or require additional information.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kelly M. Love". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Kelly M. Love
Technical Services Director

KML/cmw



FIELD SUMMARY SHEET

Roy Hopkins

LO75

SYNAGRO FIELD #	GROSS ACRES	NET ACRES	FSA TRACT #	FSA FIELD #	TOPO QUAD	OWNER
75-04	4.0	4.0			Ferncliff	Hopkins, Overton W Trustee
75-05	4.9	4.7			Ferncliff	Hopkins, Roy & Mary Jo
75-06	18.9	18.5			Ferncliff	Hopkins, Roy & Mary Jo Pryor, Brenda
75-07	5.6	5.5			Ferncliff	Hopkins, Roy & Mary Jo Hopkins, Roy & Mary Jo
75-08	3.4	3.2			Ferncliff	Hopkins, Roy & Mary Jo
75-11	5.5	4.9			Pendleton	Hopkins, Roy & Mary Jo
75-12	23.8	23.8			Pendleton	Hopkins, Roy & Mary Jo
75-13	21.1	21.1			Pendleton	Hopkins, Roy & Mary Jo
75-14	29.4	27.5			Pendleton	Hopkins, Roy & Mary Jo
75-15	10.7	10.7			Pendleton	Hopkins, Roy & Mary Jo
75-16	16.4	15.7			Pendleton	Hopkins, Roy & Mary Jo
75-18	2.5	2.5			Pendleton	Hopkins, Roy & Mary Jo
75-20	23.0	23.0			Ferncliff Pendleton	Owen, Carol Lynn
75-21	7.9	7.8			Ferncliff	Owen, Carol Lynn
75-23	11.5	11.5			Ferncliff	Owen, Carol Lynn
75-24	1.4	1.2			Ferncliff	Hopkins, Roy & Mary Jo
75-25	29.8	29.5			Ferncliff	Hopkins, Roy & Mary Jo
75-26	4.9	4.8			Ferncliff	Hopkins, Roy & Mary Jo
75-28	9.6	9.4			Ferncliff	Hopkins, Overton W Trustee
75-29	12.9	12.8			Ferncliff	Hopkins, Overton W Trustee
75-30	54.2	49.0			Ferncliff	Hopkins, Steven B & Crysti B
75-31	15.9	15.4			Ferncliff	Hopkins, Roy & Mary Jo

SYNAGRO FIELD #	GROSS ACRES	NET ACRES	FSA TRACT #	FSA FIELD #	TOPO QUAD	OWNER
75-32	18.3	17.9			Ferncliff Pendleton	Woolfolk Holding, LLC
75-33	12.0	11.4			Ferncliff Pendleton	Woolfolk Holding, LLC
75-34	6.0	5.8			Pendleton	Woolfolk Holding, LLC
75-35	12.3	10.7			Pendleton	Woolfolk Holding, LLC
75-36	73.8	71.6			Pendleton	Hopkins, Roy & Michael & Kimberly & Mary Jo
75-37	14.9	12.6			Ferncliff	Owen, Carol Lynn
75-38	59.9	57.1			Ferncliff	Hopkins, Roy E & Mary Jo
75-39	7.5	6.4			Pendleton	Woolfolk, Cosby Lee
75-40	6.9	5.8			Pendleton	Woolfolk, Cosby Lee
75-41	23.8	23.8			Ferncliff	Wright, Donald
75-42	15.4	14.1			Ferncliff	Wright, Donald
75-43	13.3	11.7			Ferncliff	Wright, Donald
TOTALS:	581.4	555.4				

**VIRGINIA POLLUTION ABATEMENT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This biosolids/industrial residuals land application agreement is made on 3/7/12 between Hopkins referred to here as "Landowner", and Synagro referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

I am the registered owner of real property known as Riverview Farms, located in Louisa Virginia, which includes the agricultural sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID
✓ 56-91	✓ 56-34 56-36	✓ 56-96	56-97
56-30	✓ 56-35	56-99	56-102 (Dam-13)
56-95	✓ 56-37	56-100	✓ 57-1/57-1A

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

☐ I am the sole owner of the properties identified herein.

☒ I am one of multiple owners of the properties identified herein.

In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:

1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
2. Notify the permit holder of the sale within two weeks following closing.

I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this agreement becomes invalid.

I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance.

Class B biosolids Water treatment residuals Food processing waste Other industrial sludges
☒ Yes ☐ No ☒ Yes ☐ No ☒ Yes ☐ No ☒ Yes ☐ No

Roy E. Hopkins Roy Hopkins 306 Horseshoe Farm Rd., Louisa, VA
 Landowner - Printed Name Signature Mailing Address

Permittee:

Synagro, the permittee, agrees to apply biosolids and/or industrial residuals on the landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for land application and specifically prior to any particular application to landowner's land. Notice shall include the source of residuals to be applied.

Lee Rosson Lee Rosson
 Permittee - Authorized Representative Signature
 Printed Name

10647 Tidewater Trail
 Mailing Address
Champlain VA 22438

Permittee: Synagro
Landowner: Roy E. Hopkins

Permit # or County: Louisa
Farm name or address: Riverview Farms, LLC

Landowner Site Management Requirements:

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Roy E. Hopkins Mary Jo Hopkins 3/07/12
Landowner's Signature Date

**VIRGINIA POLLUTION ABATEMENT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This biosolids/industrial residuals land application agreement is made on 3/14/12 between Wright referred to here as "Landowner", and Synagro referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

I am the registered owner of real property known as LO - 75, located in Louise, Virginia, which includes the agricultural sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>
<u>69-29</u>	<u>SEE Tax ID</u>	<u>sheet it site</u>	<u>Book</u>
<u>69-30</u>			
<u>79-19</u>			

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☒ I am the sole owner of the properties identified herein.
☐ I am one of multiple owners of the properties identified herein.

In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:

1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
2. Notify the permit holder of the sale within two weeks following closing.

I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this agreement becomes invalid.

I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance.

<u>Class B biosolids</u>	<u>Water treatment residuals</u>	<u>Food processing waste</u>	<u>Other industrial sludges</u>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

<u>Donald Wright</u>	<u>DW Wright</u>	<u>6908 Gray Moss Ct</u>	<u>Richmond VA</u>
Landowner - Printed Name	Signature	Mailing Address	<u>23234</u>

Permittee:

Synagro, the permittee, agrees to apply biosolids and/or industrial residuals on the landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for land application and specifically prior to any particular application to landowner's land. Notice shall include the source of residuals to be applied.

<u>Lee C. Rosson</u>	<u>Lee C Rosson</u>	<u>10647 Tidewater Trail</u>
Permittee - Authorized Representative	Signature	Mailing Address
Printed Name		<u>Champlain VA 22438</u>

LO - 75

Permittee: Synagro
Landowner: Wright

Permit # or County: Louisa
Farm name or address: LO - 75

Landowner Site Management Requirements:

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

J V Wright
Landowner's Signature

3-14-12
Date

**VIRGINIA POLLUTION ABATEMENT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This biosolids/industrial residuals land application agreement is made on 3/14/12 between Hopkins referred to here as "Landowner", and Synagro referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

I am the registered owner of real property known as LO-75, located in Louisa, Virginia, which includes the agricultural sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID
<u>56-93</u>	<u>See Tax ID sheet in site Book</u>		
<u>56-93A</u>	<u>56-102A</u>		
<u>56-94</u>			

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☒ I am the sole owner of the properties identified herein.
☐ I am one of multiple owners of the properties identified herein.

In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:

1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
2. Notify the permit holder of the sale within two weeks following closing.

I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this agreement becomes invalid.

I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance.

<u>Class B biosolids</u>	<u>Water treatment residuals</u>	<u>Food processing waste</u>	<u>Other industrial sludges</u>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

<u>Steve Hopkins</u>	<u>[Signature]</u>	<u>5517 Rembert Rd</u>	<u>Louisville</u>
Landowner - Printed Name	Signature	Mailing Address	
<u>Crysti Hopkins</u>	<u>Crysti Hopkins</u>		<u>23093</u>

Permittee:

Synagro, the permittee, agrees to apply biosolids and/or industrial residuals on the landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for land application and specifically prior to any particular application to landowner's land. Notice shall include the source of residuals to be applied.

<u>Lee C. Rosson</u>	<u>[Signature]</u>	<u>10647 Tidewater Trail</u>
Permittee - Authorized Representative	Signature	Mailing Address
Printed Name		<u>Champlain, VA 22438</u>

Permittee: Synagro
Landowner: Hopkins

Permit # or County: Louisa
Farm name or address: LO - 75

Landowner Site Management Requirements:

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.


I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).


Landowner's Signature

Craig Hopkins

3-14-12
Date

**VIRGINIA POLLUTION ABATEMENT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This biosolids/industrial residuals land application agreement is made on 3/7/12 between Pryor referred to here as "Landowner", and Synagro referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

I am the registered owner of real property known as LC-75, located in Louisa Virginia, which includes the agricultural sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID
<u>56-34</u>	<u>see Tax ID</u>	<u>Sheet in site</u>	<u>Book</u>
<u>56-96</u>			

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☒ I am the sole owner of the properties identified herein.
☐ I am one of multiple owners of the properties identified herein.

In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:

1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
2. Notify the permit holder of the sale within two weeks following closing.

I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this agreement becomes invalid.

I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance.

<u>Class B biosolids</u>	<u>Water treatment residuals</u>	<u>Food processing waste</u>	<u>Other industrial sludges</u>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

<u>Brenda Pryor</u>	<u>Brenda Pryor</u>	<u>3376</u>	<u>Pryor Rd Beachland VA</u>
Landowner - Printed Name	Signature	Mailing Address	<u>23063</u>

Permittee:

Synagro, the permittee, agrees to apply biosolids and/or industrial residuals on the landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for land application and specifically prior to any particular application to landowner's land. Notice shall include the source of residuals to be applied.

<u>L. Rosson</u>	<u>L. Rosson</u>
Permittee - Authorized Representative	Signature
Printed Name	

<u>10647 Tidewater Trail</u>
Mailing Address
<u>Champlain, VA 22438</u>

Permittee: Synagro

Permit # or County: Louisa

Landowner: Pryor

Farm name or address: LO-75

Landowner Site Management Requirements:

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Bronda Pryor
Landowner's Signature

3-7-12
Date

**VIRGINIA POLLUTION ABATEMENT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This biosolids/industrial residuals land application agreement is made on 3/19/12 between Hopkins referred to here as "Landowner", and Synagro referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

I am the registered owner of real property known as LO-75, located in Louisa Virginia, which includes the agricultural sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>
<u>56-33</u>	<u>See Tax ID Sheet For</u>	<u>site</u>	<u>Book</u>

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☒ I am the sole owner of the properties identified herein.
☐ I am one of multiple owners of the properties identified herein.

In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:

1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
2. Notify the permit holder of the sale within two weeks following closing.

I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this agreement becomes invalid.

I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance.

<u>Class B biosolids</u>	<u>Water treatment residuals</u>	<u>Food processing waste</u>	<u>Other industrial sludges</u>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

<u>Overton W. Hopkins</u>	<u>Overton W. Hopkins</u>	<u>2292 E. Jack Sower TT Rd.</u>
Landowner - Printed Name	Signature	Mailing Address

Permittee:

Synagro, the permittee, agrees to apply biosolids and/or industrial residuals on the landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for land application and specifically prior to any particular application to landowner's land. Notice shall include the source of residuals to be applied.

<u>L. Bosson</u>	<u>L. Bosson</u>	<u>3710 10647 Tidewater Trail</u>
Permittee - Authorized Representative	Signature	Mailing Address
Printed Name		<u>Champlain VA</u>
		<u>22438</u>

Permittee: Synagre
Landowner: Hopkins

Permit # or County: Louisa
Farm name or address: LO-75

Landowner Site Management Requirements:

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Overton W. Hopkins
Landowner's Signature

March 19 2012
Date

**VIRGINIA POLLUTION ABATEMENT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This biosolids/industrial residuals land application agreement is made on 3/12/12 between Owen referred to here as "Landowner", and Synagro referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

I am the registered owner of real property known as Smith Farm, located in Louisa Virginia, which includes the agricultural sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>
<u>56-107</u>	<u>See Tax ID</u>	<u>Sheet in site</u>	<u>Book</u>

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☒ I am the sole owner of the properties identified herein.
☐ I am one of multiple owners of the properties identified herein.

In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:

1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
2. Notify the permit holder of the sale within two weeks following closing.

I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this agreement becomes invalid.

I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance.

Class B biosolids

☒ Yes ☐ No

Water treatment residuals

☒ Yes ☐ No

Food processing waste

☒ Yes ☐ No

Other industrial sludges

☒ Yes ☐ No

CAROL LYNN OWEN

Landowner - Printed Name

Carol Lynn Owen

Signature

12525 Wendy Lane

Mailing Address

Amelia, VA 23002

Permittee:

Synagro, the permittee, agrees to apply biosolids and/or industrial residuals on the landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for land application and specifically prior to any particular application to landowner's land. Notice shall include the source of residuals to be applied.

L. Rosson Lee Rosson

Permittee - Authorized Representative
Printed Name

Signature

10647 Tidewater Trail

Mailing Address

Champlain, VA 22438

Permittee: Synagre

Permit # or County: Louisa

Landowner: CAROL LYNN OWEN

Farm name or address: Smith Farm

Landowner Site Management Requirements:

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Carol Lynn Owen
Landowner's Signature

3/12/12
Date

**VIRGINIA POLLUTION ABATEMENT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This biosolids/industrial residuals land application agreement is made on 3/16/12 between Hopkins referred to here as "Landowner", and Synagro referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

I am the registered owner of real property known as LO-75, located in Louisa Virginia, which includes the agricultural sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>
<u>57-1B</u>	<u>See Tax ID Sheet</u>		
<u>56-106</u>			
<u>57-1C</u>			

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☒ I am the sole owner of the properties identified herein.
☐ I am one of multiple owners of the properties identified herein.

In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:

1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
2. Notify the permit holder of the sale within two weeks following closing.

I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this agreement becomes invalid.

I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance.

Class B biosolids

☒ Yes ☐ No

Water treatment residuals

☒ Yes ☐ No

Food processing waste

☒ Yes ☐ No

Other industrial sludges

☒ Yes ☐ No

Michael Hopkins

Landowner - Printed Name

Michael Hopkins

Signature

5964 Roundabout Rd Lou

Mailing Address

Permittee:

Synagro, the permittee, agrees to apply biosolids and/or industrial residuals on the landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for land application and specifically prior to any particular application to landowner's land. Notice shall include the source of residuals to be applied.

L. Rosson

Permittee - Authorized Representative
Printed Name

L. Rosson

Signature

10647 Tidewater Trail

Mailing Address

Champlain VA 22438

Permittee: Synagro

Permit # or County: Louisa

Landowner: Hopkins

Farm name or address: Lo - 75

Landowner Site Management Requirements:

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Mahol Hopkins
Landowner's Signature

Kim Hopkins

March 16, 2012
Date

**VIRGINIA POLLUTION ABATEMENT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This biosolids/industrial residuals land application agreement is made on 3/15/12 between Hopkins referred to here as "Landowner", and Synagro referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

I am the registered owner of real property known as LO-75, located in Louisa Virginia, which includes the agricultural sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID
<u>See Tax ID sheet in site Book</u>			

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☒ I am the sole owner of the properties identified herein.
☐ I am one of multiple owners of the properties identified herein.

In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:

1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
2. Notify the permit holder of the sale within two weeks following closing.

I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this agreement becomes invalid.

I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance.

<u>Class B biosolids</u>	<u>Water treatment residuals</u>	<u>Food processing waste</u>	<u>Other industrial sludges</u>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

<u>Riverbend Farms Land LLC</u>	<u>[Signature]</u>	<u>5517 Roundabout Rd Louisa VA</u>
Landowner - Printed Name	Signature	Mailing Address

Permittee:

Synagro, the permittee, agrees to apply biosolids and/or industrial residuals on the landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for land application and specifically prior to any particular application to landowner's land. Notice shall include the source of residuals to be applied.

<u>Lee Rosson</u>	<u>[Signature]</u>	<u>10647 Tidewater Trail</u>
Permittee - Authorized Representative	Signature	Mailing Address
Printed Name		

Permittee: Synagro

Permit # or County: Louisa

Landowner: Hopkins

Farm name or address: LO-75

Landowner Site Management Requirements:

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).


Landowner's Signature

3-15-12
Date

LO 75

**VIRGINIA POLLUTION ABATEMENT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**
PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This biosolids/industrial residuals land application agreement is made on 3/4/2013 between Woolfolk Holdings, LLC referred to here as "Landowner", and Synagro referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

I am the registered owner of real property known as LO - 75, located in Louisa, Virginia, which includes the agricultural sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>	<u>Tax Parcel ID</u>
<u>57 - 11</u>			
<u>57 - 128</u>			

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☒ I am the sole owner of the properties identified herein.
☐ I am one of multiple owners of the properties identified herein.

In the event that I, the landowner, sell or transfer all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, I shall:

1. Notify the purchaser of the applicable public access and crop management restrictions no later than the closing date; and
2. Notify the permit holder of the sale within two weeks following closing.

I have no other agreements for land application on the fields identified herein. I will notify the permittee immediately if conditions change such that the fields are no longer available to the permittee for application or any part of this agreement becomes invalid.

I hereby grant permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. I also grant permission for DEQ staff to conduct inspections on my land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance.

☐ Class B biosolids ☐ Water treatment residuals ☒ Other industrial sludges (check all that apply)

Woolfolk Holdings, LLC

Gosby Lee & Nancy Woolfolk

Landowner - Printed Name

Signature

518 Bloomington Lane

Mailing Address

Permittee:

Synagro, the permittee, agrees to apply biosolids and/or industrial residuals on the landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. Permittee will provide a copy of the NMP to the landowner within 30 days after land application has commenced. If the plan requires modification to reflect the actual application rates or farming practices at the site, a revised plan will be provided within 2 weeks of the modification.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for land application and specifically prior to any particular application to landowner's land. Notice shall include the source of residuals to be applied.

Lee C. Rosson

Permittee - Authorized Representative
Printed Name

Lee C Rosson

Signature

10647 Tidewater Trail
Champlain, VA 22438

Mailing Address

Permittee: Synagro

Permit # or County: Louisa

Landowner: Costy Lee & Nancy Woolfolk
Woolfolk Holdings, LLC

Farm name or address: LO - 75

Landowner Site Management Requirements:

I, the landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, at least 30 days after land application at that site was completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days,
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids or industrial residuals borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Woolfolk Holdings, LLC
Landowner's Signature

Nancy O. Woolfolk

3/4/2013
Date

Tax ID Landowner Identification Sheet

<u>Landowner</u>	<u>Field #</u>	<u>Tax ID</u>
HOPKINS, OVERTON W TRUSTEE	75-04	56 - 33
HOPKINS, ROY E & MARY JO	75-05	56 - 34, 101, 102C
HOPKINS, ROY E & MARY JO	75-06	56 - 96
PRYOR, BRENDA H		56 - 34
PRYOR, BRENDA H	75-07	56 - 34
HOPKINS, ROY E & MARY JO		56 - 96
HOPKINS, ROY E & MARY JO	75-08	56 - 96
HOPKINS, ROY E & MARY JO	75-11	56 - 95
HOPKINS, ROY E & MARY JO	75-12	57 - 40
HOPKINS, ROY E & MARY JO	75-13	57 - 40
HOPKINS, ROY E & MARY JO	75-14	56 - 35
HOPKINS, ROY E & MARY JO	75-15	56 - 35
HOPKINS, ROY E & MARY JO	75-16	56 - 106
HOPKINS, STEVE B & CRYSTI B	75-18	56 - 98
OWEN, CAROL LYNN	75-20	56 - 107
OWEN, CAROL LYNN	75-21	56 - 107
OWEN, CAROL LYNN	75-23	56 - 107
HOPKINS, ROY E & MARY JO	75-24	56 - 102
HOPKINS, ROY E & MARY JO	75-25	56 - 102
HOPKINS, ROY E & MARY JO	75-26	56 - 102
HOPKINS, OVERTON W TRUSTEE	75-28	56 - 33
HOPKINS, OVERTON W TRUSTEE	75-29	56 - 33
HOPKINS, STEVEN B & CRYSTI B	75-30	56 - 93, 93A, 94, 102A
HOPKINS, ROY E & MARY JO	75-31	56 - 35, 37
WOOLFOLK HOLDING LLC	75-32	57 - 11
		57 - 128

<u>Landowner</u>	<u>Field #</u>	<u>Tax ID</u>
WOOLFOLK HOLDING LLC	75-33	57 - 11 57 - 128
WOOLFOLK HOLDING LLC	75-34	57 - 128 57 - 11
WOOLFOLK HOLDING LLC	75-35	57 - 11, 11A
HOPKINS, ROY ELLIS	75-36	57 - 1
HOPKINS, KIMBERLY O		57 - 1C
HOPKINS, MICHAEL E & KIMBERLY O		57 - 1B
HOPKINS, MARY JO		57 - 1A
OWEN, CAROL LYNN	75-37	56 - 107
HOPKINS, ROY E & MARY JO	75-38	56 - 91
WOOLFOLK, COSBY LEE	75-39	57 - 11
WOOLFOLK, COSBY LEE	75-40	57 - 11
WRIGHT, DONALD W	75-41	69 - 29, 30
WRIGHT, DONALD W	75-42	69 - 30
WRIGHT, DONALD W	75-43	79 - 19

Field #	Latitude (north)	Longitude (west)
75-04	37° 57' 41.63"	78° 01' 27.69"
75-05	37° 58' 50.45"	78° 00' 04.78"
75-06	37° 57' 54.33"	78° 01' 31.25"
75-07	37° 57' 56.46"	78° 01' 18.95"
75-08	37° 58' 49.02"	78° 00' 10.81"
75-11	37° 58' 56.35"	77° 59' 43.02"
75-12	37° 58' 47.07"	77° 59' 09.38"
75-13	37° 58' 41.99"	77° 59' 03.19"
75-14	37° 59' 09.57"	77° 58' 59.46"
75-15	37° 59' 18.33"	77° 58' 56.48"
75-16	37° 59' 24.83"	77° 58' 39.43"
75-18	37° 59' 37.37"	77° 58' 28.14"
75-20	37° 58' 59.61"	77° 59' 59.24"
75-21	37° 59' 03.18"	78° 00' 10.82"
75-23	37° 58' 49.47"	78° 00' 22.07"
75-24	37° 57' 45.95"	78° 01' 08.13"
75-25	37° 57' 39.10"	78° 01' 07.30"
75-26	37° 57' 30.59"	78° 00' 48.72"
75-28	37° 57' 40.53"	78° 01' 30.47"
75-29	37° 57' 49.64"	78° 01' 37.86"
75-30	37° 58' 13.41"	78° 01' 08.23"
75-31	37° 58' 06.99"	78° 01' 44.64"
75-32	37° 59' 34.41"	77° 59' 58.44"
75-33	37° 59' 28.47"	77° 59' 55.78"
75-34	37° 59' 29.43"	77° 59' 42.77"
75-35	37° 59' 34.92"	77° 59' 33.17"
75-36	37° 59' 51.51"	77° 59' 34.76"
75-37	37° 58' 44.79"	78° 00' 31.14"
75-38	37° 58' 36.42"	78° 00' 51.13"
75-39	37° 59' 41.84"	77° 59' 31.74"
75-40	37° 59' 41.87"	77° 59' 42.50"
75-41	37° 55' 18.81"	78° 00' 26.94"
75-42	37° 55' 15.88"	78° 00' 11.65"
75-43	37° 55' 01.07"	78° 00' 05.07"

Haul Route:

The location maps in conjunction with the above latitude and longitude coordinates are a route planning tool meant to be a guide to indicate suggested haul routes for various preferences; to include but not limited to all federal, state, and local granted STAA access routes.



Tax Map ID 56-33, 34



Scale: 1:9027.977411

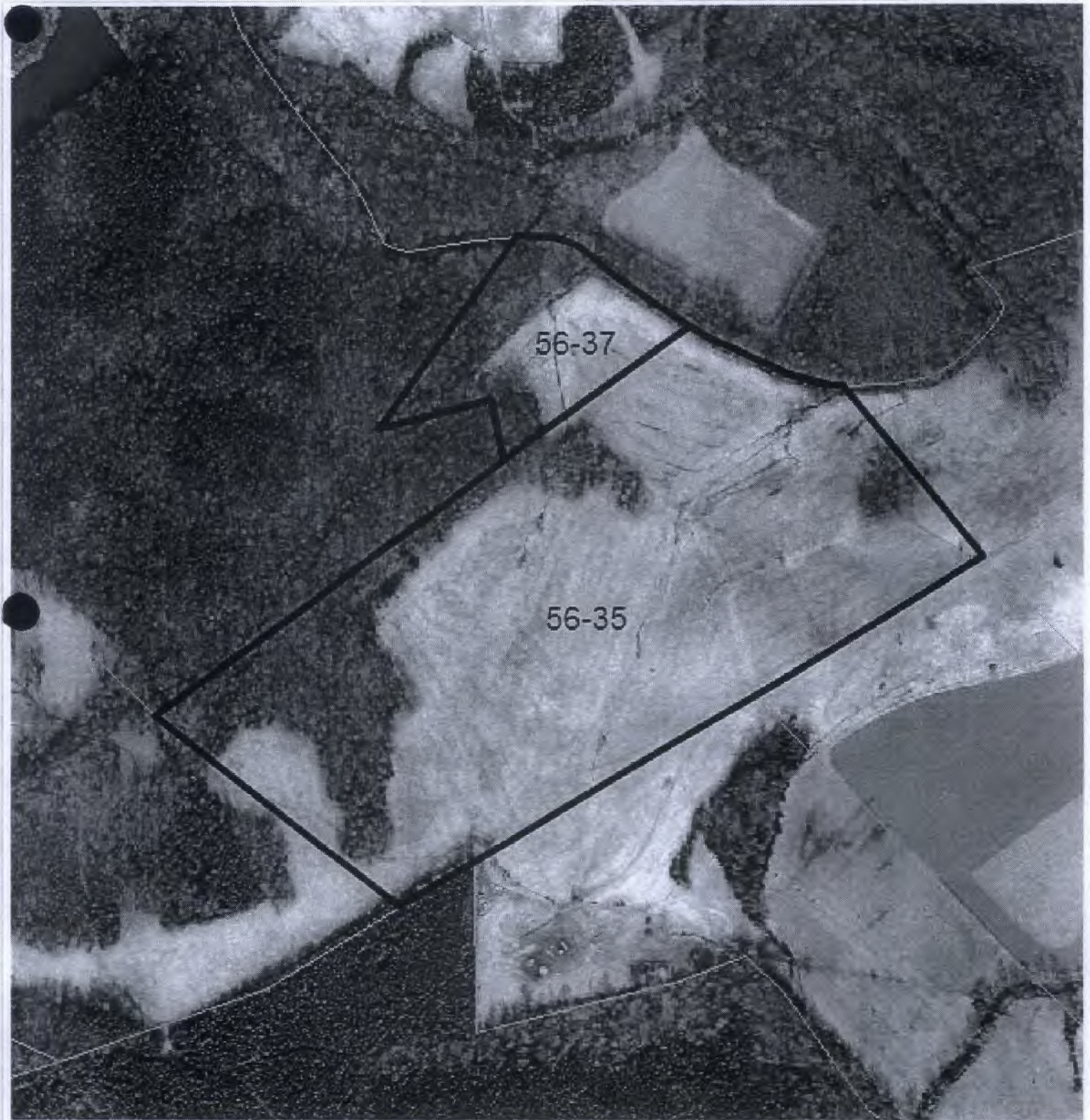
Date: 05/08/2012

Printed By:

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Tax Map ID 56-35, 37



Scale: 1:9027.977411

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Tax Map ID 56-96



Scale: 1:9027.977411

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Tax Map ID 56-101, 102C



Scale: 1:2256.994353

Date: 05/08/2012

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Tax Map ID 56-95



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Tax Map ID 56-106



Scale: 1:4513.988705

Date: 05/08/2012

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Tax Map ID 56-102



Scale: 1:18055.954822

Date: 05/08/2012

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Tax Map ID 56-93, 94



Scale: 1:9027.977411

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Tax Map ID 57-1, 1A, 1B, 1C



Scale: 1:18055.954822

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Tax Map ID 56-91



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Tax Map ID 56-98



Scale: 1:2256.994353

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Tax Map ID 57-11



Scale: 1:18055.954822

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Tax Map ID 57-128



Scale: 1:9027.977411

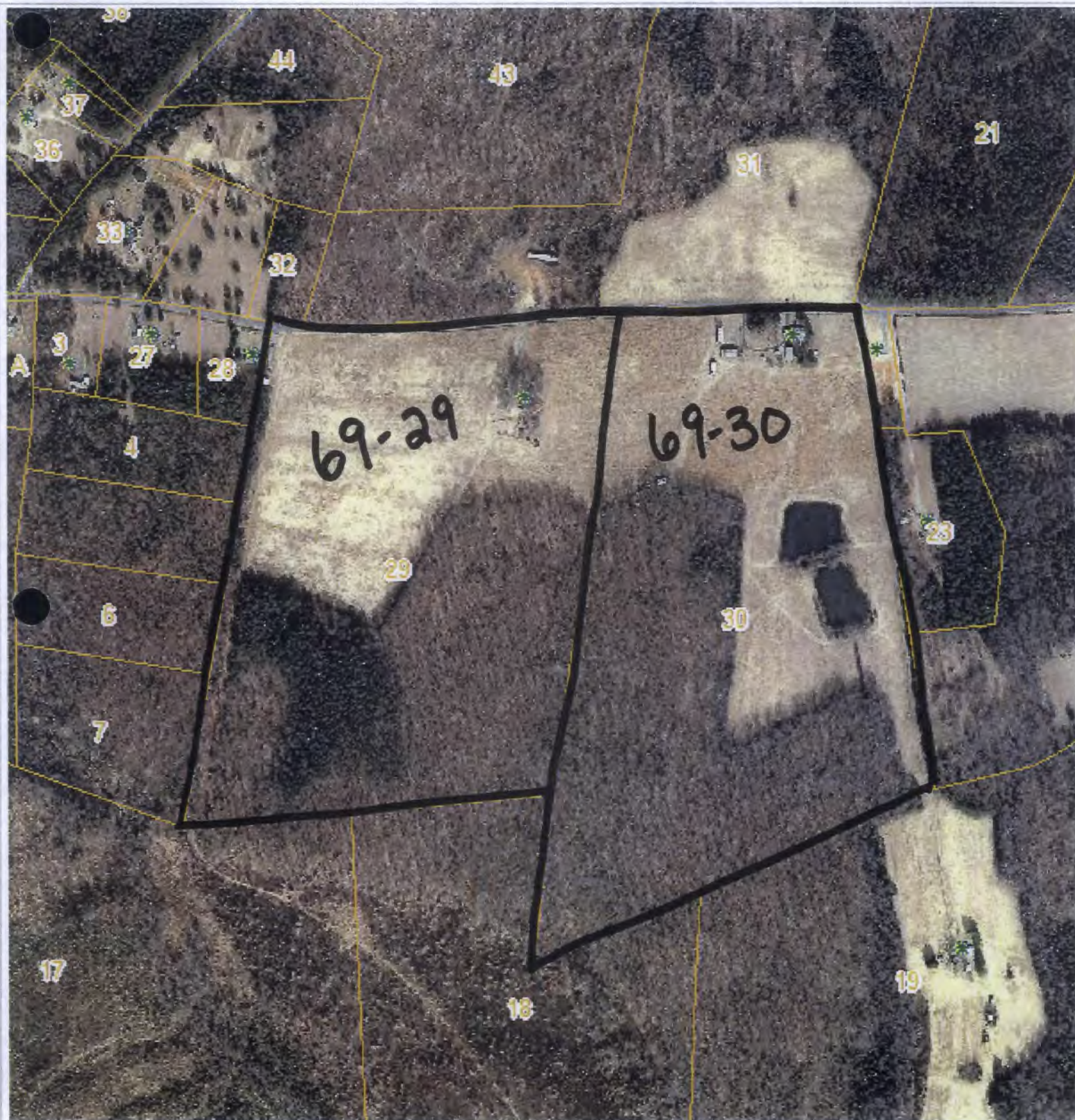
Date: 05/08/2012

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69-29, 69-30



Scale: 1:9027.977411

Date: 03/08/2013

Printed By:

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Field	Map Unit	Acres	Percentage	Soil Series	High Water	Flood	Environmental Sensitive
75-04	Ch	3.6	92	Chewacla	Nov-April	Nov-April	
75-04	CfC3	0.3	8				
75-05	OrB	4.7	100				
75-06	Ch	10.4	58	Chewacla	Nov-April	Nov-April	
75-06	Ts	7.4	42	Tocca		Jan-Dec	
75-07	Ch	5.4	100	Chewacla	Nov-April	Nov-April	
75-08	OrB	1.5	48				
75-08	SeB	1.0	31	Sekil			Leaching
75-08	SeC	0.7	21	Sekil			Leaching
75-11	CfC3	2.6	52				
75-11	TaB2	2.4	48				
75-12	NoB2	9.4	40				
75-12	NoC2	9.4	40				
75-12	TaB2	3.8	15				
75-12	CcC2	1.2	5				
75-13	NoC2	7.0	33				
75-13	TaB2	5.6	27				
75-13	NoB2	3.9	19				
75-13	TaC2	2.6	12				
75-13	NaD2	2.0	9				
75-14	NoC2	11.7	43				
75-14	TaB2	9.2	34				
75-14	NoB2	4.0	15				
75-14	NaC2	2.3	8				
75-15	NoB2	7.0	66				
75-15	NaC2	2.2	21				
75-15	NoC2	1.4	13				
75-16	TaC2	7.3	48				
75-16	TaB2	6.6	44				
75-16	RoB	1.3	8				
75-17	NoB2	5.2	34				
75-17	NoC2	4.6	31				
75-17	TaB2	3.6	24				
75-17	RoB	1.6	11				
75-18	NoB2	8.3	43				
75-18	RoB	7.0	36				
75-18	LgB	4.0	21	Lignum	Dec-May		

Field	Map Unit	Acres	Percentage	Soil Series	High Water	Flood	Environmental Sensitive
75-19	NoC2	26.3	22				
75-19	TaB2	23.8	20				
75-19	NoB2	22.1	19				
75-19	TmC3	13.7	12				
75-19	CcB2	11.5	10				
75-19	RoB	7.4	6				
75-19	TaC2	7.7	6				
75-19	TmB3	5.6	5				
75-20	OrB	9.5	100				
75-21	OrB	7.5	100				
75-23	CcB2	7.1	64				
75-23	CfC3	2.6	23				
75-23	CeB3	0.7	7				
75-23	OrB	0.6	6				
75-24	TuB	1.2	100				
75-25	CcB2	11.4	38				
75-25	CfC3	8.1	28				
75-25	TuB	8.2	28				
75-25	Ch	1.8	6	Chewacla	Nov-April	Nov-April	
75-26	Ch	4.3	93	Chewacla	Nov-April	Nov-April	
75-26	We	0.3	7	Wehadkee	Nov-May	Nov-June	
75-28	Ts	6.9	74	Tocca		Jan-Dec	
75-28	Ch	2.4	26	Chewacla	Nov-April	Nov-April	
75-29	Ch	7.8	64	Chewacla	Nov-April	Nov-April	
75-29	Ts	3.6	29	Tocca		Jan-Dec	
75-29	SeC	0.9	7	Sekil			Leaching
75-30	SeC	16.0	33	Sekil			Leaching
75-30	Ch	13.6	28	Chewacla	Nov-April	Nov-April	
75-30	CcB2	8.6	18				
75-30	Ts	5.1	11	Tocca		Jan-Dec	
75-30	CfC3	4.8	10				
75-31	Ch	10.1	66	Chewacla	Nov-April	Nov-April	
75-31	Cn	2.9	19				
75-31	FIC2	1.3	9				
75-31	MoC	0.9	6				
75-32	AnB2	9.4	53				
75-32	CfC3	7.5	42				
75-32	CcB2	1.0	5				
75-33	CcC2	5.3	46				
75-33	CcB2	3.1	27				
75-33	AnB2	1.6	14				
75-33	AnC2	0.9	8				
75-33	CfC3	0.6	5				

Field	Map Unit	Acres	Percentage	Soil Series	High Water	Flood	Environmental Sensitive
75-34	SeC	3.1	57	Sekil			Leaching
75-34	WH	1.8	32	Wehadkee-Chew	Nov-May	Nov-June	
75-34	CcB2	0.6	11				
75-35	CcB2	5.0	48				
75-35	SeC	3.4	33	Sekil			Leaching
75-35	SeB	1.1	10	Sekil			Leaching
75-35	WH	0.9	9	Wehadkee-Chew	Nov-May	Nov-June	
75-36	CcB2	27.8	40				
75-36	CfC3	12.8	18				
75-36	NoB2	11.9	17				
75-36	CcC2	10.9	15				
75-36	NsC3	6.8	10				
75-37	CeB3	3.8	30				
75-37	CfC3	3.5	28				
75-37	SeC	2.8	22	Sekil			Leaching
75-37	CcB2	2.5	20				
75-38	CfC3	17.1	31				
75-38	CeB3	15.2	27				
75-38	SeC	12.4	22	Sekil			Leaching
75-38	WH	11.3	20	Wehadkee-Chew	Nov-May	Nov-June	
75-39	CcB2	3.7	58				
75-39	AnC2	2.1	32				
75-39	CfC3	0.6	10				
75-40	CfC3	4.1	70				
75-40	WH	1.0	18	Wehadkee-Chew	Nov-May	Nov-June	
75-40	CcB2	0.7	12				
75-41	TaB2	20.9	90				
75-41	TmC3	2.3	10				
75-42	TaC2	8.2	59				
75-42	TaB2	5.7	41				
75-43	NoB2	5.7	49				
75-43	NoC2	4.1	35				
75-43	AIB	1.0	9				
75-43	OrB	0.8	7				

Environmentally Sensitive Areas

Field	Reason for Sensitive Area
75-04	High Water Table (Map Unit Ch – 92%) Flooded Soils (Map Unit Ch – 92%)
75-05	None
75-06	High Water Table (Map Unit Ch – 58%) Flooded Soils (Map Units Ch, Ts – 100%)
75-07	High Water Table (Map Unit Ch – 100%) Flooded Soils (Map Unit Ch – 100%)
75-08	Leaching Potential (Map Unit SeB, SeC – 52%)
75-11	None
75-12	None
75-13	None
75-14	None
75-15	None
75-16	None
75-17	None
75-18	High Water Table (Map Unit LgB – 21%)
75-19	None
75-20	None
75-21	None
-	
75-23	None
75-24	None
75-25	High Water Table (Map Unit Ch – 6%) Flooded Soils (Map Unit Ch – 6%)
75-26	High Water Table (Map Units Ch, We – 100%) Flooded Soils (Map Units Ch, We – 100%)
75-28	High Water Table (Map Unit Ch – 26%) Flooded Soils (Map Units Ch, Ts – 100%)
75-29	High Water Table (Map Unit Ch – 64%) Flooded Soils (Map Units Ch, Ts – 93%) Leaching Potential (Map Unit SeC – 7%)
75-30	High Water Table (Map Unit Ch – 28%) Flooded Soils (Map Units Ch, Ts – 39%) Leaching Potential (Map Unit SeC – 33%)
75-31	High Water Table (Map Unit Ch – 66%) Flooded Soils (Map Unit Ch – 66%)

Field	Reason for Sensitive Area
75-32	None
75-33	None
75-34	High Water Table (Map Unit WH – 32%) Flooded Soils (Map Unit WH – 32%) Leaching Potential (Map Unit SeC – 57%)
75-35	High Water Table (Map Unit WH – 9%) Flooded Soils (Map Unit WH – 9%) Leaching Potential (Map Units SeB, SeC – 43%)
75-36	None
75-37	Leaching Potential (Map Unit SeC – 22%)
75-38	High Water Table (Map Unit WH – 20%) Flooded Soils (Map Unit WH – 20%) Leaching Potential (Map Unit SeC – 22%)
75-39	None
75-40	High Water Table (Map Unit WH – 18%) Flooded Soils (Map Unit WH – 18%)
75-41	None
75-42	None

Louisa County Soils that are Environmentally Sensitive

Soil Map Unit	Series Name	Time of year		Environmental
		High Water	Flooded	
AsB, AsC, AsD	Ashlar			Leaching
AsC3, AsD3	Ashlar			Leaching
AV	Ashlar			Leaching
Ch	Chewacla	Nov – April	Nov – April	
CIB	Colfax	Nov – June		
Eb	Elbert	Nov – May		
FN	Fluvaquents	Nov – April	Nov – April	
Fo	Forestdale	Jan – April	Jan – April	
FrB	Fork	Oct – May	Oct – May	
IdB	Iredell	Dec – April		
IdB2, IdC2	Iredell	Dec – April		
IrA, IrB	Iredell	Dec – April		
Iv	Iredell	Dec – April		
LgB	Lignum	Dec – May		
MnB, MnC, MnD	Madison			Shallow
MoC, MoD	Madison			Shallow
SeB, SeC, SeD	Sekil			Leaching
SeC3	Sekil			Leaching
SP	Sekil			Leaching
To	Tocca		Jan – Dec	
Ts	Tocca		Jan – Dec	
We	Wehadkee	Nov – May	Nov – June	
WH	Wehadkee-Chewacla	Nov – May	Nov – June	
WoB	Worsham	Nov – May		

MAP LEGEND



House/Dwelling with a well



Rock Outcrop



Well



Lake/Pond



Slope which exceeds 15%



Intermittent Stream



Stream/River



Agricultural/Drainage Ditch



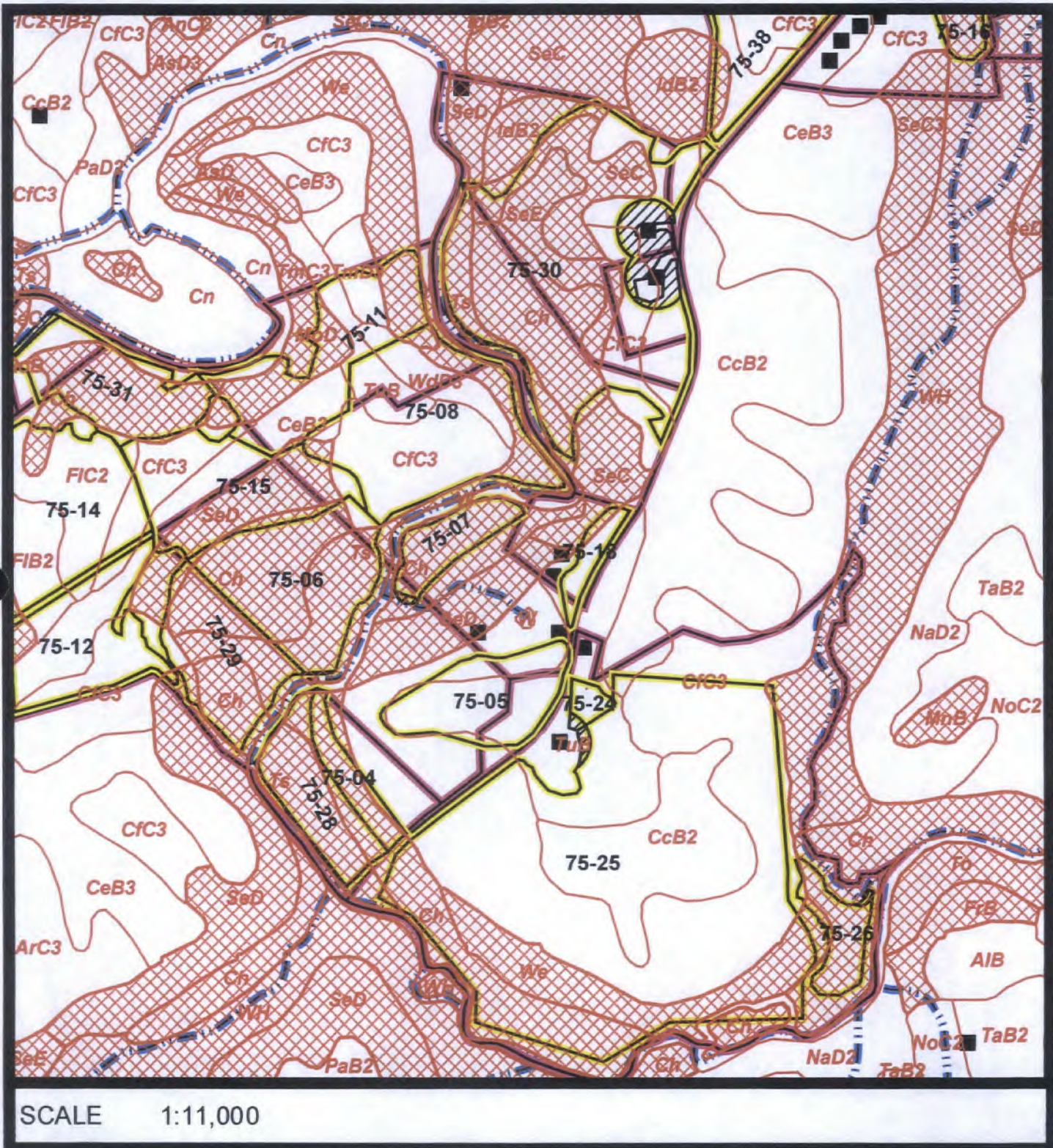
Field boundary



Property Line -- (Standard 100'
Buffer, unless waiver issued)

Revised: Jan. 13, '14

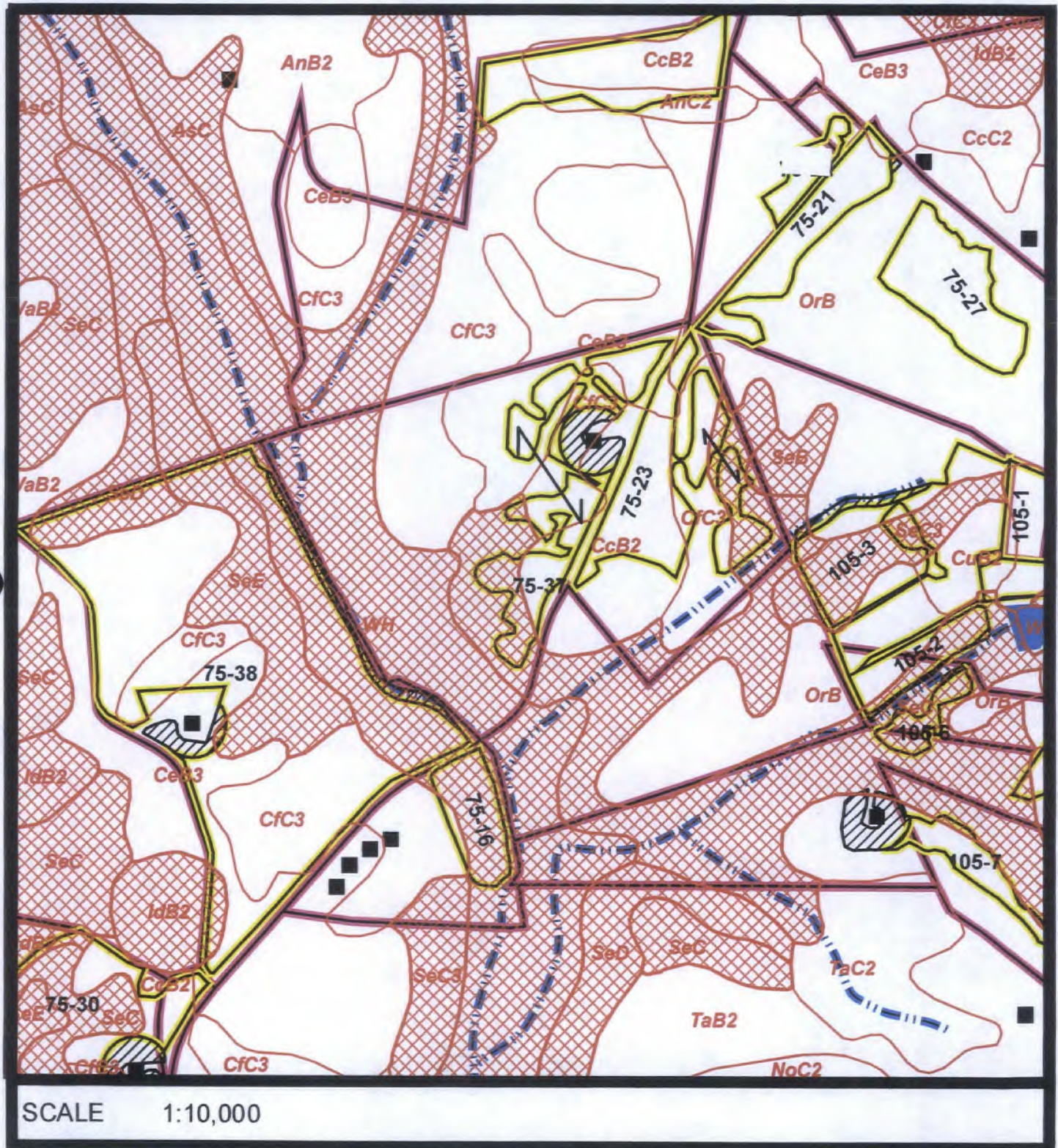
 Environmentally Sensitive Soil




SOIL MAP

 Environmentally Sensitive Soil



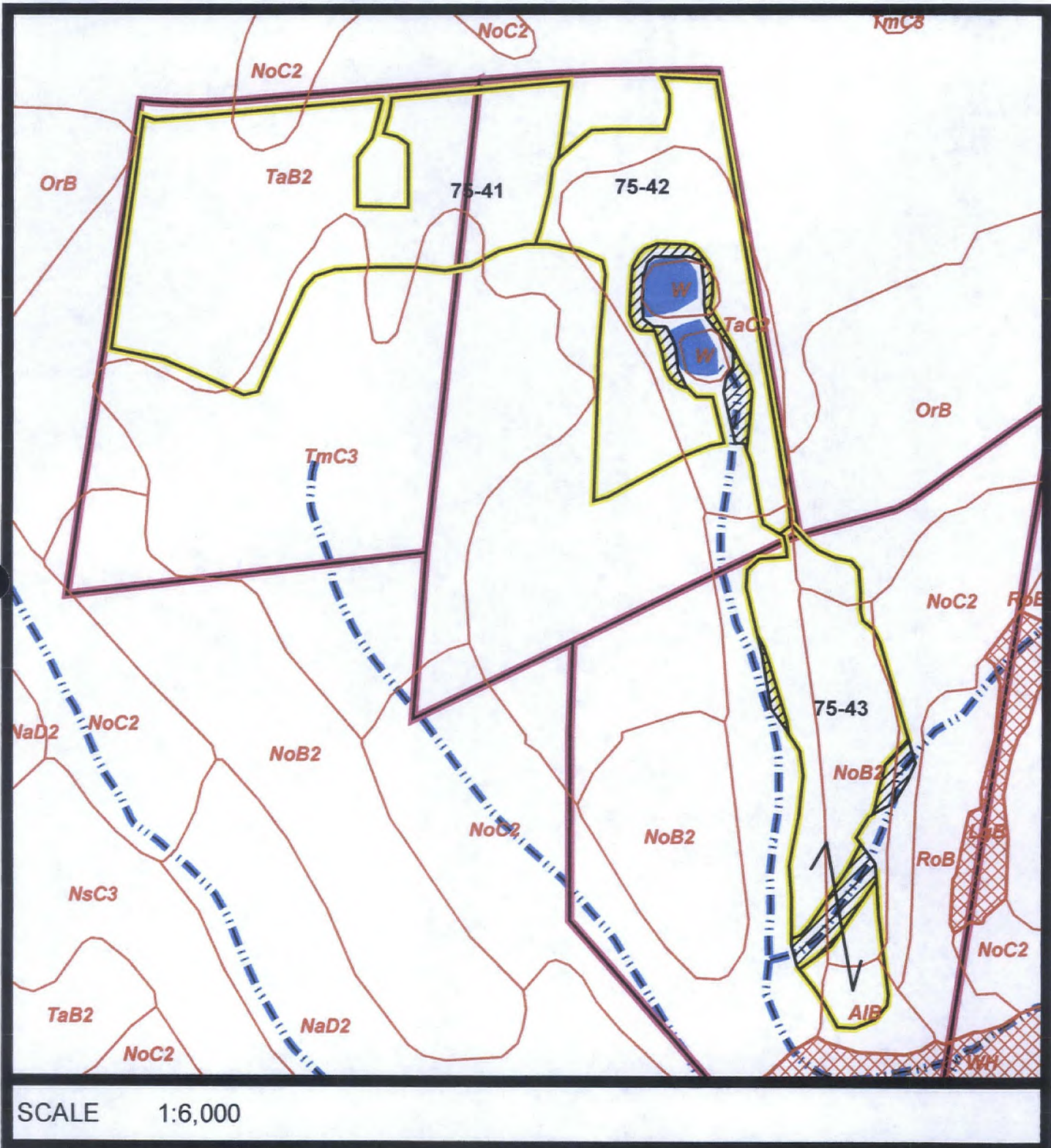


SOIL MAP

 Environmentally Sensitive Soil

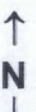
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 Environmentally Sensitive Soil



SOIL MAP

 Environmentally Sensitive Soil

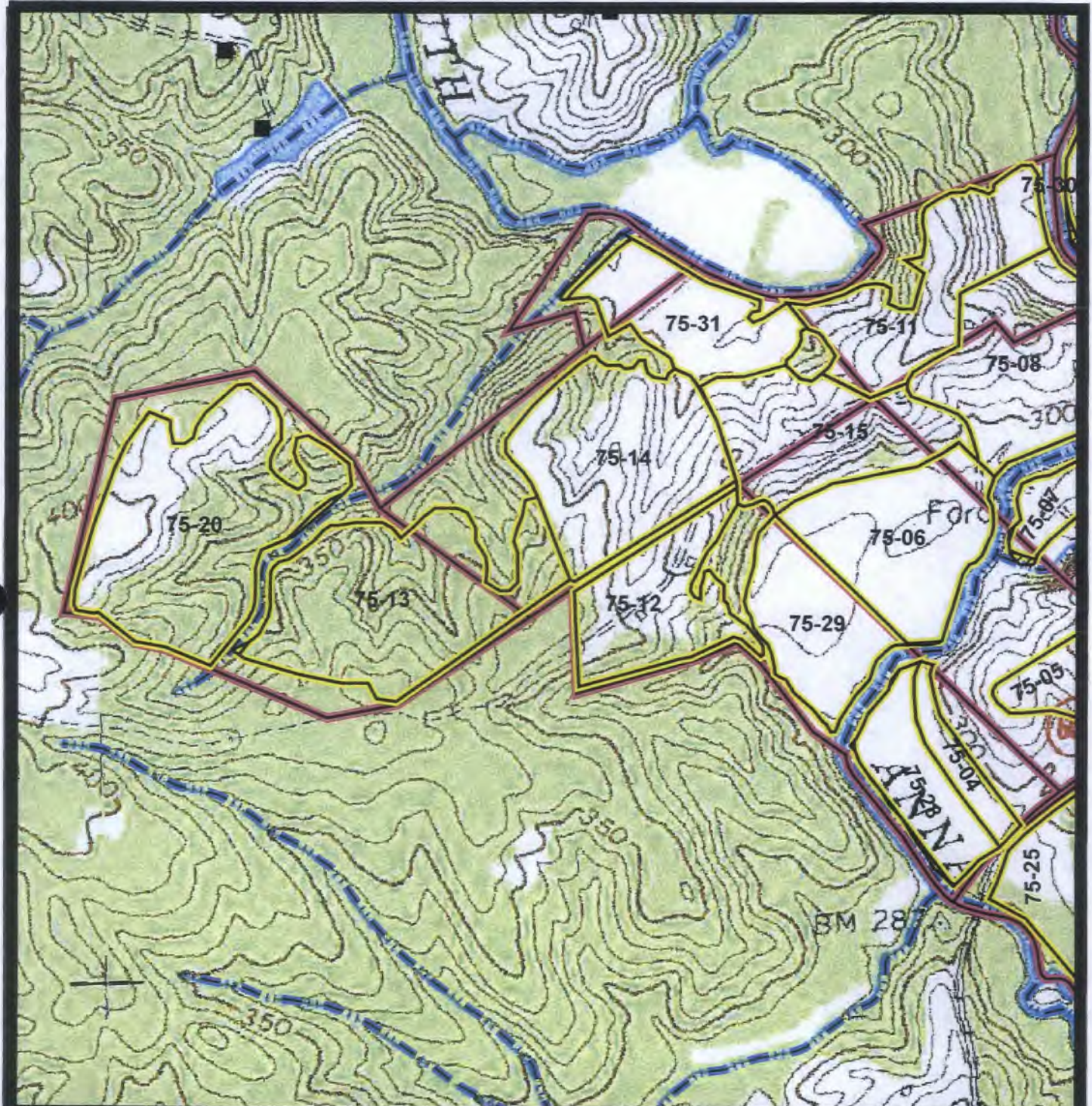


SYNAGRO

Roy Hopkins

LO75

Fields 4, 6, 12-15, 20, 28, 29, 31



SCALE 1:10,000

TOPO MAP

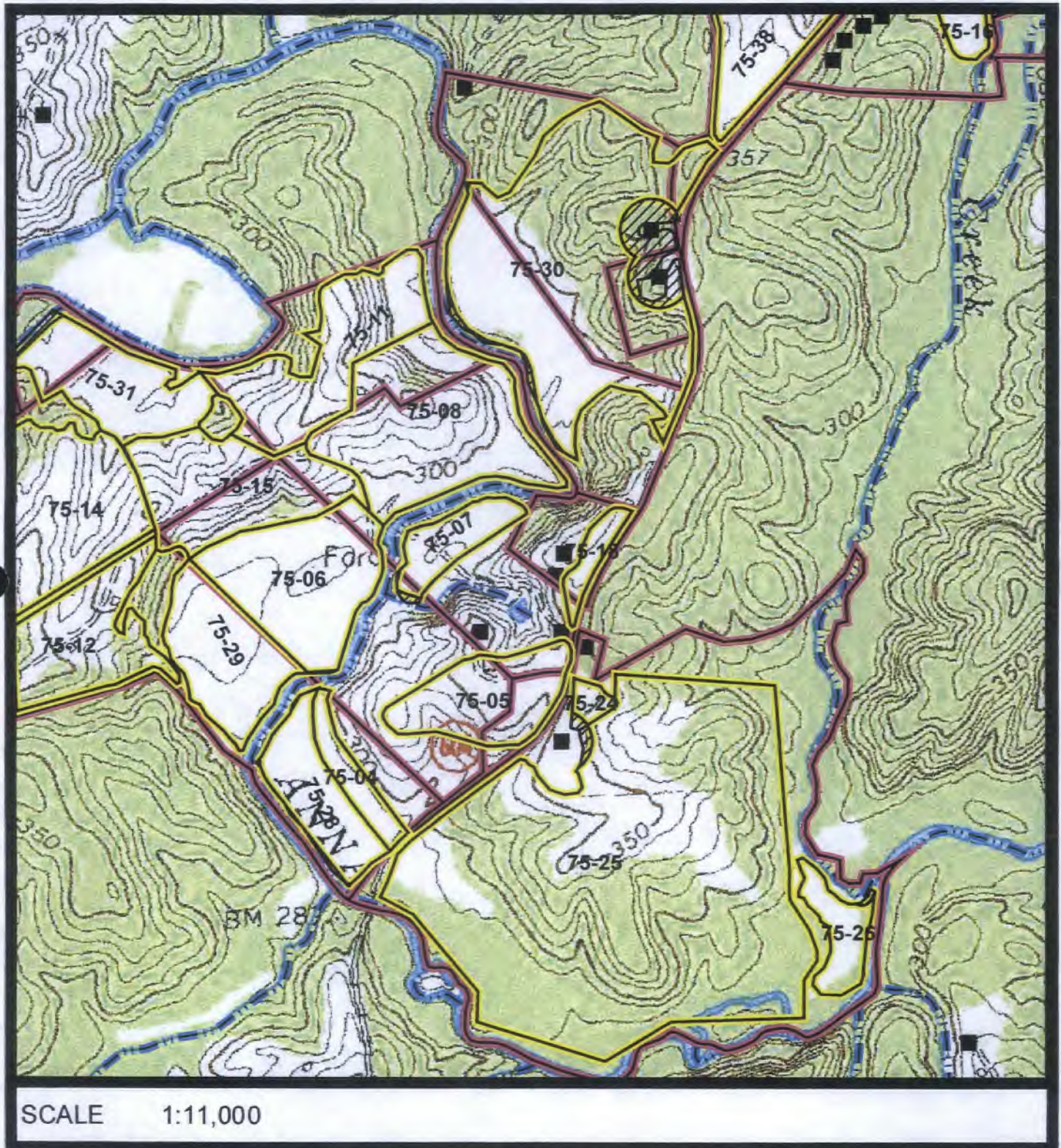
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SYNAGRO

Roy Hopkins

LO75

Fields 5, 7, 8, 11, 24-26, 30



TOPO MAP

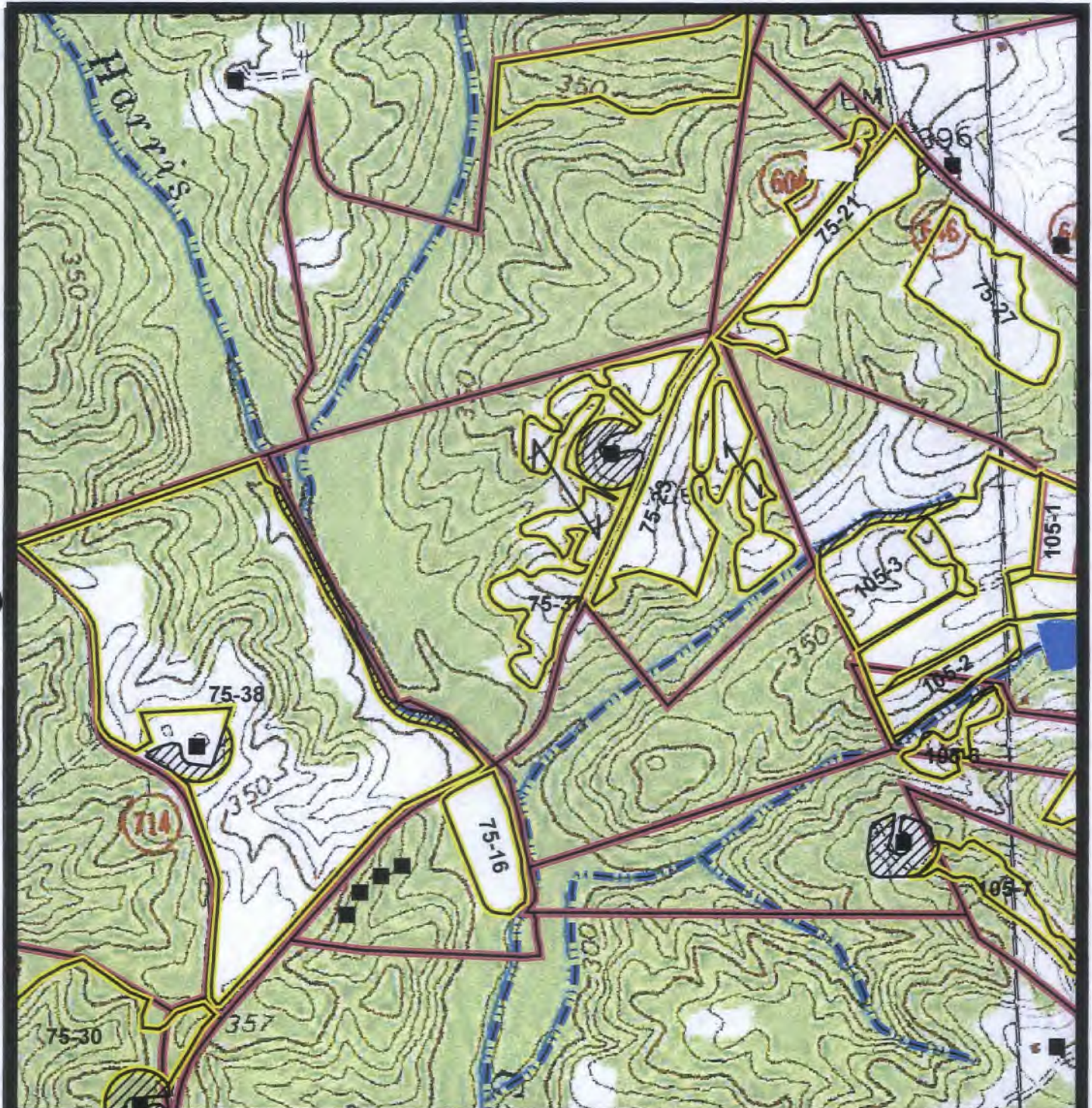
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SYNAGRO

Roy Hopkins

LO75

Fields 16, 21 – 23, 27, 37, 38



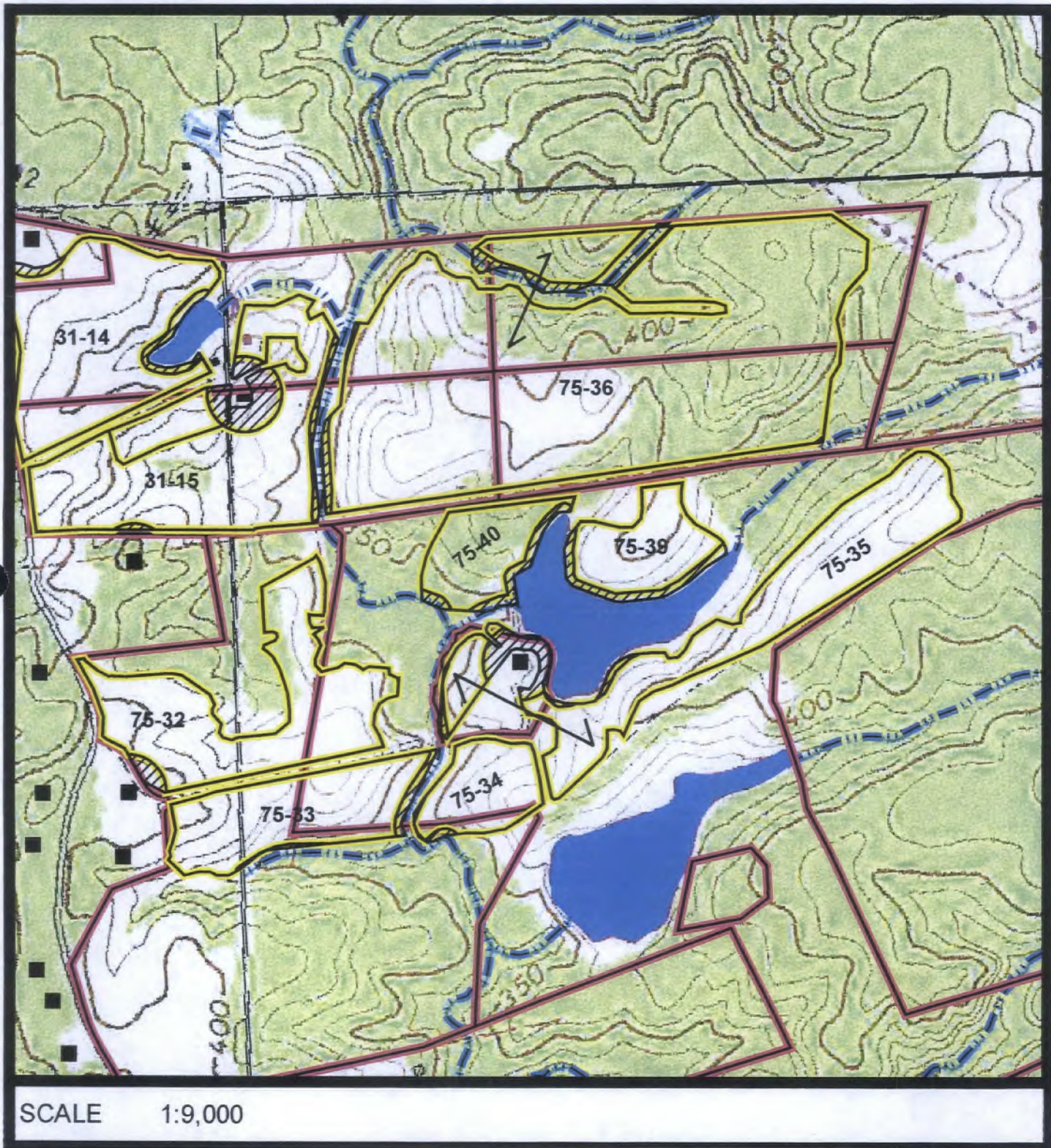
SCALE 1:10,000

TOPO MAP

↑
N
↓

SYNAGRO

Roy Hopkins
LO75
Fields 32 – 36, 39

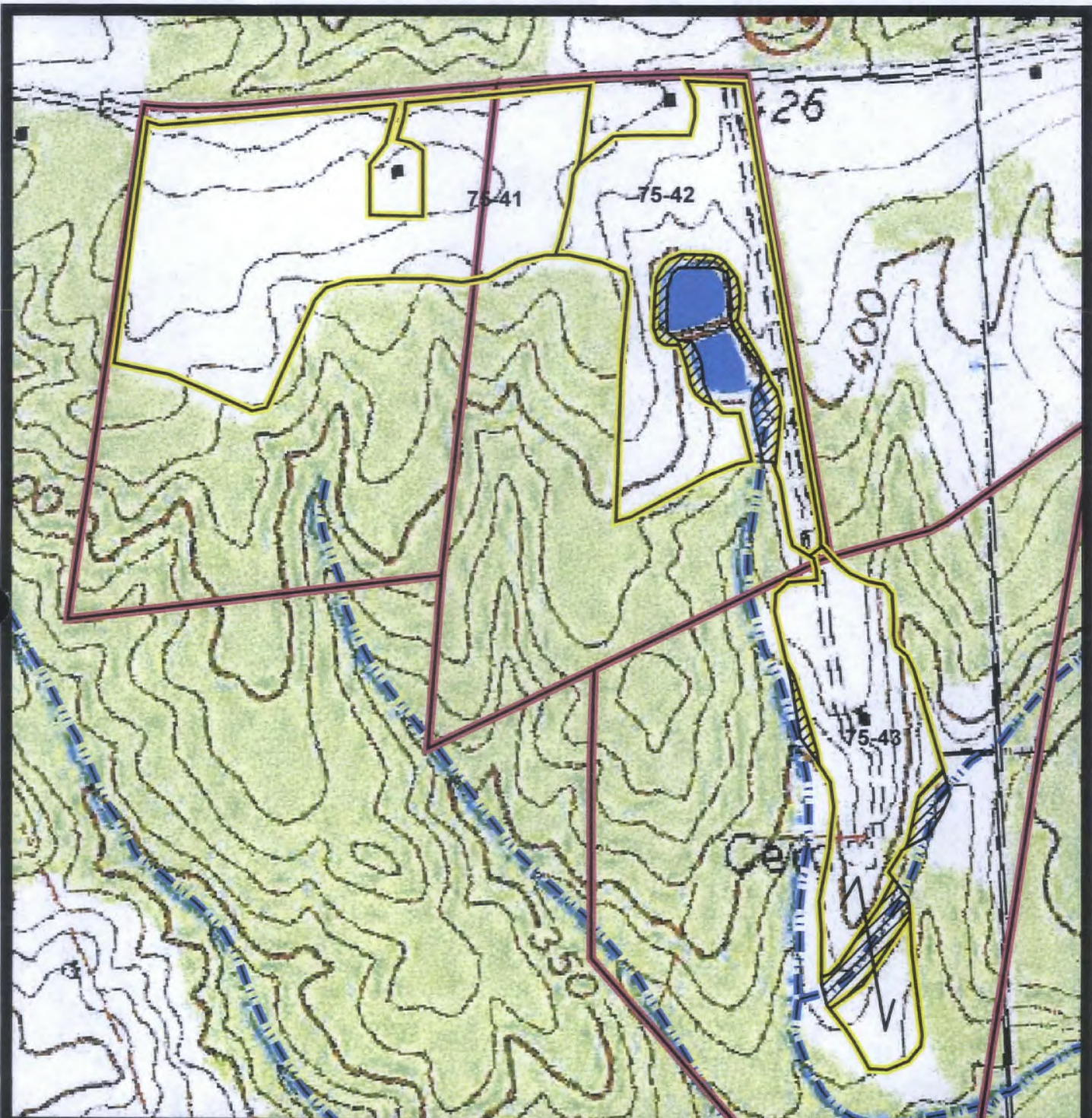


TOPO MAP

↑
N
↓

SYNAGRO

Roy Hopkins
LO75
Fields 41 – 43



SCALE 1:6,000

TOPO MAP

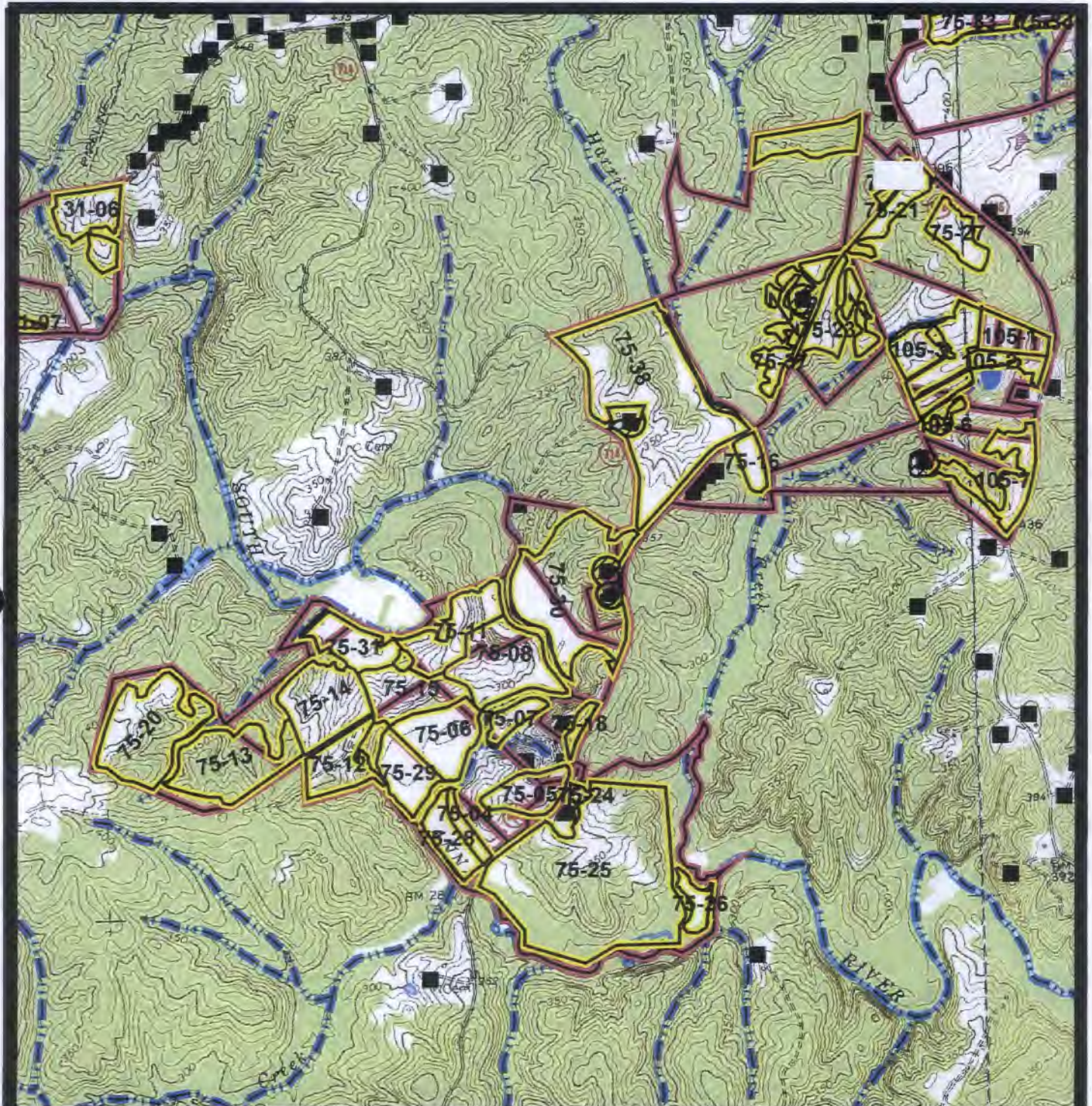
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SYNAGRO

Roy Hopkins

LO75

Fields 4 - 8, 11 - 18, 20 - 31, 37, 38



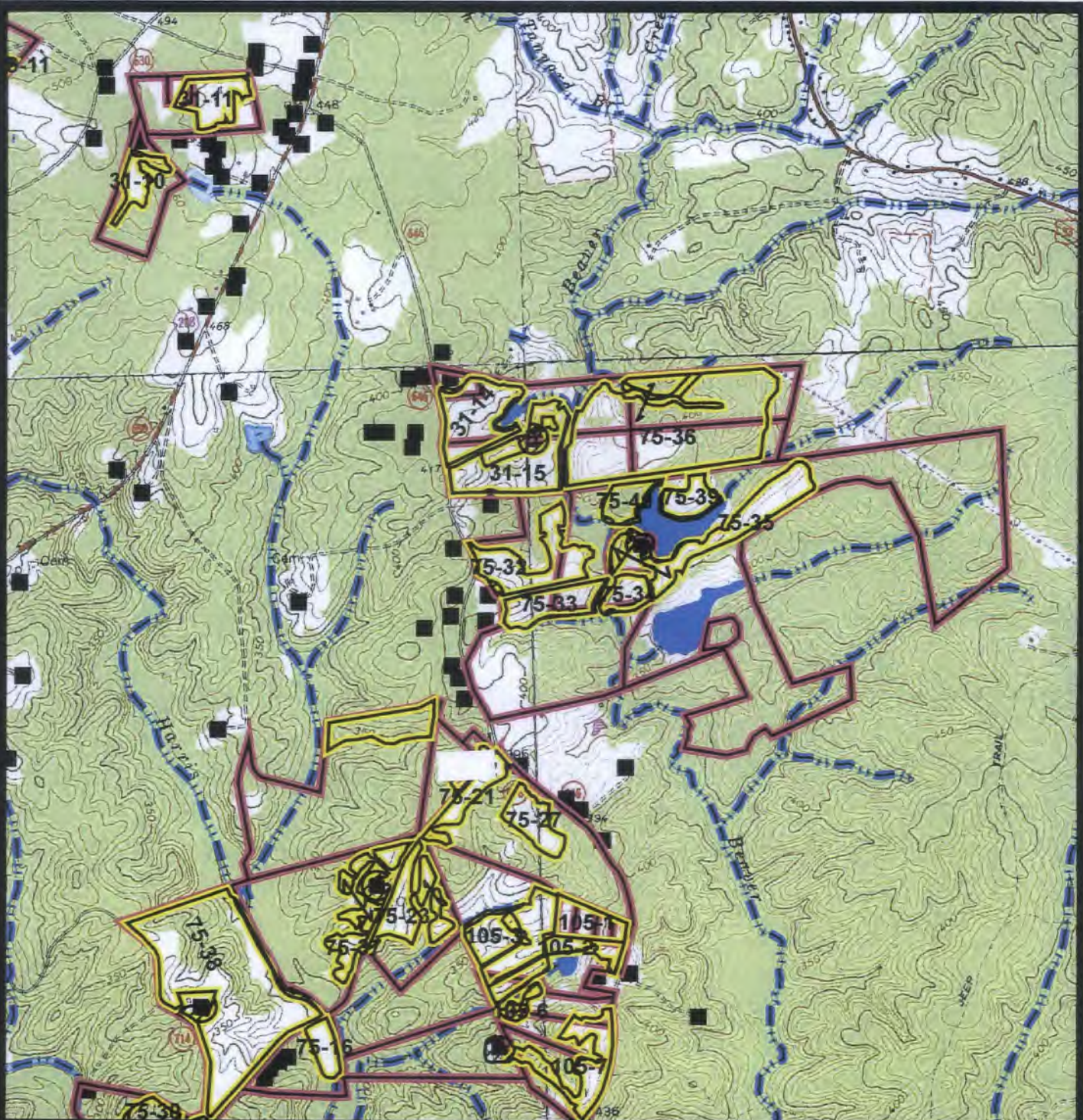
SCALE 1:24,000

TOPO MAP

↑
N
↓

SYNAGRO

Roy Hopkins
LO75
Fields 32 – 36, 39, 40



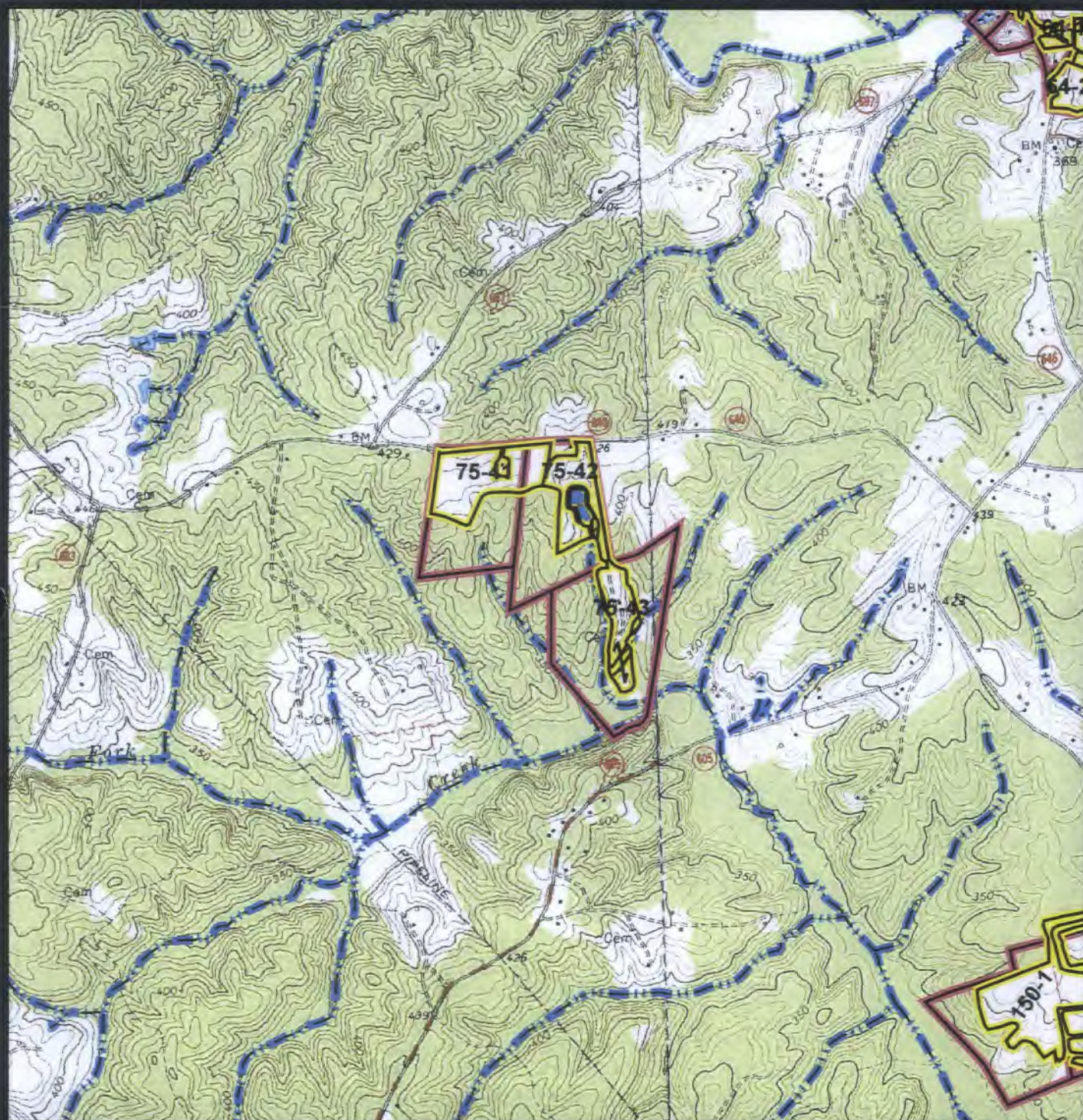
SCALE 1:24,000

TOPO MAP

↑
N
↓

SYNAGRO

Roy Hopkins
LO75
Fields 41 – 43



SCALE 1:24,000

TOPO MAP



